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10/679,293	10/07/2003	Byung-Hoon Oh	1293.1862	4006
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STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER BUTLER, DENNIS	
			ART UNIT 2115	PAPER NUMBER
			MAIL DATE 06/25/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/679,293

Applicant(s)

OH ET AL.

Examiner

Dennis M. Butler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-7,13 and 15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,13 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. This action is in response to the amendment received on April 3, 2007. Claims 1, 3-7, 13 and 15 are pending.
2. The text of those sections of Title 35, US Code not included in this action can be found in a prior Office Action.
3. The rejection of claims 1, 3-7, 13 and 15 under 35 U.S.C. 112, first paragraph, is withdrawn in view of applicant's amendments and arguments.
4. Claims 3-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 3, the phrase "so that monitor information is readable by the computer" in the wherein clause is unclear and indefinite as to its relationship to the predetermined signal and powering the monitor on and off. Specifically, it is unclear what condition the phrase applies to, the on condition, the off condition or both the on and off conditions of the predetermined signal.

Claims 4-6 are rejected because they incorporate the deficiencies of claim 3.

5. Claims 1, 3-7, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., U. S. Patent 5,961,647 in view of Chaiken et al., U. S. Patent 6,223,283.

Per claim 1:

A) Kim et al teach the following claimed items:

1. a computer (computer 100) outputting a predetermined signal indicating whether the computer is powered on or off with the signal output from 1<sup>st</sup> Power

Supply 120 to switching circuit 250 in figures 4 and 5, at column 8, lines 39-44 and 51-54 and at column 9, lines 17-25;

2. a monitor (display 200) receiving the predetermined signal and powering on and off according to the predetermined signal with figure 5 and at column 8, lines 23-44 and 51-54;

3. a video card processing and transmitting a video signal to the monitor with video card 130, associated connectors and cable 300 of figure 5;

4. outputting the predetermined signal from a predetermined pin of the video card with the power supply control signal pin in cable 300 and the corresponding connector pin in the video card connector, with figure 5, at column 9, lines 17-30 and at column 5, lines 36-40;

5. transmitting the predetermined signal to the monitor whether the monitor is powered on or off at column 8, lines 39-44 and 51-54 and at column 10, lines 53-65.

B) The claims differ from Kim et al in that Kim et al fails to explicitly teach the monitor including a memory storing monitor information wherein the information is provided to the computer whether the monitor is powered on or off as claimed.

C) However, Kim describes providing a 5 volt power signal from the computer to the MICOM and switching circuit 250 with figures 4 and 5. Kim discloses supplying the 5 volt predetermined signal to the MICOM microcomputer when the monitor is powered off at column 10, lines 53-65. Therefore, Kim discloses providing a separate power source to the switching circuit components in the

monitor making the switching circuit power independent of the monitor power supply. Chaiken teaches that it is known to provide a monitor with a memory storing monitor information and that it is conventional for the BIOS to read/download the monitor information in a monitor's ROM during initialization with figure 2 and at column 1, lines 45-59. In addition, Kim acknowledges that monitors consume an undue amount of power and acknowledges that it is known to include display power management systems (DPMS) in monitors at column 1, lines 45-55 and column 7, lines 7-16. Kim further discloses improving the conventional DPMS by combining a DPMS with the MICOM and switching circuit 250 of figures 4 and 5 in order to further reduce overall power consumption of the monitor to below 1 watt at column 10, lines 53-65. This effectively makes the MICOM microcomputer part of the DPMS. As described above, Kim maintains the 5 volt power to MICOM microcomputer while the monitor is powered off thereby further reducing the power consumption of the monitor when in the power save mode because only the MICOM switching circuit remains powered. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a monitor with a memory storing monitor information, as taught by Chaiken, in order to provide the computer and BIOS with monitor information for initializing and configuring the computer. In addition, it would have been obvious to one having ordinary skill in the art at the time the invention was made to locate the memory with the MICOM switching circuit components and power the memory from the 5 volt power signal of Kim in order

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to provide power to the memory whether the monitor is powered on or off because this would allow the monitor to remain off during computer initialization and configuration thereby reducing the power consumed by the monitor.

Furthermore, it is well known in the art that microcomputers such as MICOM in display 200 typically include read only memory and it would have been obvious to one of ordinary skill in the art to use the MICOMs ROM for storing Chaiken's EDID file. It would have been obvious for one of ordinary skill in the art to combine Kim and Chaiken because of Chaiken's description that it is well known that monitors include a ROM for storing EDID files having monitor information and that it is conventional for the BIOS to read/download the EDID file in a monitors ROM during initialization at column 1, lines 45-59. Therefore, Chaiken discloses that one of ordinary skill in the art would have known that monitors include a ROM for storing EDID files having monitor information and that it is conventional for the BIOS to read/download the EDID file in a monitors ROM during initialization. It would have been obvious for one of ordinary skill in the art to locate/store the EDID file in the ROM of the monitors MICOM microcomputer in order to take advantage of the microcomputers independent power source and display power management functionality.

Per claims 3 and 4:

A) Kim et al teach the following claimed items:

1. a computer (computer 100) outputting a predetermined signal indicating whether the computer is powered on or off with the signal output from 1<sup>st</sup> Power

Supply 120 to switching circuit 250 in figures 4 and 5, at column 8, lines 39-44 and 51-54 and at column 9, lines 17-25;

2. a monitor (display 200) receiving the predetermined signal and powering on and off according to the predetermined signal with figure 5 and at column 8, lines 23-44 and 51-54;

3. a video card processing and transmitting a video signal to the monitor with video card 130, associated connectors and cable 300 of figure 5;

4. outputting the predetermined signal from a predetermined pin of the video card with the power supply control signal pin in cable 300 and the corresponding connector pin in the video card connector, with figure 5, at column 9, lines 17-30 and at column 5, lines 36-40;

5. transmitting the predetermined signal to the monitor whether the monitor is powered on or off at column 8, lines 39-44 and 51-54 and at column 10, lines 53-65;

6. a control unit comparing a reference level (the threshold voltage level of switching transistor Q1) with a level of the predetermined signal, detecting a state of the computer based on the comparison and outputting a monitor power control signal with MICOM and switching circuit 250 of figure 4 and at column 8, line 23 – column 9, line 16;

7. a power supply unit that is controlled by the control unit to supply or stop the supply of power to the monitor with 2<sup>nd</sup> Power Supply 240 of figure 4 and at column 8, line 51 – column 9, line 16.

B) The claims differ from Kim et al in that Kim et al fails to explicitly teach the monitor including a memory storing monitor information wherein the information is provided to the computer whether the monitor is powered on or off as claimed.

C) However, Kim describes providing a 5 volt power signal from the computer to the MICOM and switching circuit 250 with figures 4 and 5. Kim discloses supplying the 5 volt predetermined signal to the MICOM microcomputer when the monitor is powered off at column 10, lines 53-65. Therefore, Kim discloses providing a separate power source to the switching circuit components in the monitor making the switching circuit power independent of the monitor power supply. Chaiken teaches that it is known to provide a monitor with a memory storing monitor information and that it is conventional for the BIOS to read/download the monitor information in a monitors ROM during initialization with figure 2 and at column 1, lines 45-59. In addition, Kim acknowledges that monitors consume an undue amount of power and acknowledges that it is known to include display power management systems (DPMS) in monitors at column 1, lines 45-55 and column 7, lines 7-16. Kim further discloses improving the conventional DPMS by combining a DPMS with the MICOM and switching circuit 250 of figures 4 and 5 in order to further reduce overall power consumption of the monitor to below 1 watt at column 10, lines 53-65. This effectively makes the MICOM microcomputer part of the DPMS. As described above, Kim maintains the 5 volt power to MICOM microcomputer while the monitor is powered off thereby further reducing the power consumption of the monitor when in the



power save mode because only the MICOM switching circuit remains powered. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a monitor with a memory storing monitor information, as taught by Chaiken, in order to provide the computer and BIOS with monitor information for initializing and configuring the computer. In addition, it would have been obvious to one having ordinary skill in the art at the time the invention was made to locate the memory with the MICOM switching circuit components and power the memory from the 5 volt power signal of Kim in order to provide power to the memory whether the monitor is powered on or off because this would allow the monitor to remain off during computer initialization and configuration thereby reducing the power consumed by the monitor. Furthermore, it is well known in the art that microcomputers such as MICOM in display 200 typically include read only memory and it would have been obvious to one of ordinary skill in the art to use the MICOMs ROM for storing Chaiken's EDID file. It would have been obvious for one of ordinary skill in the art to combine Kim and Chaiken because of Chaiken's description that it is well known that monitors include a ROM for storing EDID files having monitor information and that it is conventional for the BIOS to read/download the EDID file in a monitors ROM during initialization at column 1, lines 45-59. Therefore, Chaiken discloses that one of ordinary skill in the art would have known that monitors include a ROM for storing EDID files having monitor information and that it is conventional for the BIOS to read/download the EDID file in a monitors ROM

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during initialization. It would have been obvious for one of ordinary skill in the art to locate/store the EDID file in the ROM of the monitors MICOM microcomputer in order to take advantage of the microcomputers independent power source and display power management functionality.

Per claims 5 and 6:

Kim describes detecting the level of the predetermined signal, supplying power to the monitor when the level is higher than a reference level and cutting off power when the level is lower than the reference level with the threshold voltage level of switching transistor Q1 of figure 4 and at column 8, line 58 – column 9, line 16.

Kim describes that the predetermined signal is 5V for powering on and 0V for powering off at column 10, lines 18-53.

Per claim 7:

Kim describes transmitting the predetermined signal to the monitor via a serial cable with the serial cable running from 1<sup>st</sup> Power Supply 120 to MICOM/switching circuit 250 in figure 5.

Per claim 13:

A) Kim et al teach the following claimed items:

1. receiving a predetermined signal from a computer indicating whether the computer is powered on or off with the signal output from 1<sup>st</sup> Power Supply 120 and received by the MICOM microcomputer in figure 4 and at column 8, lines 39-44 and 51-54;

2. powering the monitor on and off according to the predetermined signal with figure 4, at column 8, lines 23-44 and 51-54 and at column 10, lines 53-65;
3. transmitting the predetermined signal to the monitor whether the monitor is powered on or off at column 8, lines 39-44 and 51-54 and at column 10, lines 53-65. The computer supplies a powered on signal level when the computer is powered on and supplies a powered off signal level when the computer is powered off. In addition, the predetermined signal allows for powering the monitor off in a power save mode while maintaining power to the MICOM microcomputer via the predetermined signal.

B) The claims differ from Kim et al in that Kim et al fails to explicitly teach supplying power from the predetermined signal to a memory storing monitor information so that the monitor information is readable by the computer if the monitor is powered off as claimed.

C) However, Kim describes providing a 5 volt power signal from the computer to the MICOM and switching circuit 250 with figures 4 and 5. Kim discloses supplying the 5 volt predetermined signal to the MICOM microcomputer when the monitor is powered off at column 10, lines 53-65. Therefore, Kim discloses providing a separate power source to the switching circuit components in the monitor making the switching circuit power independent of the monitor power supply. Chaiken teaches that it is known to provide a monitor with a memory storing monitor information and that it is conventional for the BIOS to read/download the monitor information in a monitors ROM during initialization

with figure 2 and at column 1, lines 45-59. In addition, Kim acknowledges that monitors consume an undue amount of power and acknowledges that it is known to include display power management systems (DPMS) in monitors at column 1, lines 45-55 and column 7, lines 7-16. Kim further discloses improving the conventional DPMS by combining a DPMS with the MICOM and switching circuit 250 of figures 4 and 5 in order to further reduce overall power consumption of the monitor to below 1 watt at column 10, lines 53-65. This effectively makes the MICOM microcomputer part of the DPMS. As described above, Kim maintains the 5 volt power to MICOM microcomputer while the monitor is powered off thereby further reducing the power consumption of the monitor when in the power save mode because only the MICOM switching circuit remains powered. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a monitor with a memory storing monitor information, as taught by Chaiken, in order to provide the computer and BIOS with monitor information for initializing and configuring the computer. In addition, it would have been obvious to one having ordinary skill in the art at the time the invention was made to locate the memory with the MICOM switching circuit components and power the memory from the 5 volt power signal of Kim in order to provide power to the memory whether the monitor is powered on or off because this would allow the monitor to remain off during computer initialization and configuration thereby reducing the power consumed by the monitor. Furthermore, it is well known in the art that microcomputers such as MICOM in

display 200 typically include read only memory and it would have been obvious to one of ordinary skill in the art to use the MICOMs ROM for storing Chaiken's EDID file. It would have been obvious for one of ordinary skill in the art to combine Kim and Chaiken because of Chaiken's description that it is well known that monitors include a ROM for storing EDID files having monitor information and that it is conventional for the BIOS to read/download the EDID file in a monitors ROM during initialization at column 1, lines 45-59. Therefore, Chaiken discloses that one of ordinary skill in the art would have known that monitors include a ROM for storing EDID files having monitor information and that it is conventional for the BIOS to read/download the EDID file in a monitors ROM during initialization. It would have been obvious for one of ordinary skill in the art to locate/store the EDID file in the ROM of the monitors MICOM microcomputer in order to take advantage of the microcomputers independent power source and display power management functionality.

Per claim 15:

Kim describes transmitting the predetermined signal to the monitor via a serial cable with the serial cable running from 1<sup>st</sup> Power Supply 120 to MICOM in figure 4. Kim describes detecting the level of the predetermined signal, supplying power to the monitor when the level is higher than a reference level and cutting off power when the level is lower than the reference level with the threshold voltage level of switching transistor Q1 of figure 4 and at column 8, line 58 – column 9, line 16. Kim describes powering off the monitor when the predetermined signal is

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not received due to the computer being in a DPMS mode or a power off mode at column 8, lines 51-54, at column 9, lines 8-16 and at column 10, lines 47-65.

6. Applicant's arguments filed on April 3, 2007 have been fully considered but they are not persuasive.

In the Remarks, applicant has argued in substance that:

A. The claimed invention is not obvious over Kim in view of Chaiken. There must be evidenced motivation, outside of the present application, which motivates, leads or suggests to one of ordinary skill in the art to modify a reference. An "obvious to try" rationale for combining two references is not proper motivation under 35 USC 103.

7. As to point A, the examiner disagrees with applicant's contentions. The examiner did not use an "obvious to try" rationale as stated by applicant. Furthermore, applicant's arguments regarding teaching, suggestion, evidenced motivation and "obvious to try" rationale are improper. The Supreme Court ruled that applicant is not entitled to such to such a liberal interpretation of what should be patentable. *Graham v. John Deere* controls obvious inquiries not a rigid application of the teaching/suggestion/motivation test. Teaching/suggestion/motivation test as a litmus test for obviousness is inconsistent with the *Graham* framework. Rigid preventative rules that deny factfinders recourse to common sense are neither necessary under our case law nor consistent with it. Where there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill in the art has good reason to pursue the known options within his or her technical grasp. (*KSR v. Teleflex*,

Supreme Court April 30, 2007). Chaiken discloses that one of ordinary skill in the art would have known that monitors include a ROM for storing EDID files having monitor information and that it is conventional for the BIOS to read/download the EDID file in a monitors ROM during initialization. It would have been obvious for one of ordinary skill in the art to locate/store the EDID file in the ROM of the monitors MICOM microcomputer in order to take advantage of the microcomputers independent power source and display power management functionality.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reference 2001/0020982 describes that it is known in the art to include a ROM in a microcomputer (see paragraphs 33-35). Reference 6,052,792

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discloses that microcomputers/microcontrollers are well known in the art and it is known that they include ROM (see figures 1a-1B, the background of the invention and the summary of the invention sections).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis M. Butler whose telephone number is 571-272-3663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Dennis M. Butler*

Dennis M. Butler  
Primary Examiner  
Art Unit 2115